10. Spreadsheet Columns

Program Name: SpreadsheetColumns.java Input File: spreadsheetcolumns.dat

You have been assigned the task of entering data into a spreadsheet. You know the speed at which you can enter data into a single cell so you have written an equation to calculate the number of minutes it will take you to finish your work by multiplying the time it takes to input data into a single cell by the number of cells, ignoring time it takes to switch among cells. You are given the number of rows and columns which you must enter data for the entire spreadsheet. For example, if there are 5 rows and 4 columns, you will be entering data into 20 cells. If there are 9 rows and 3 columns, you will be entering data into 27 cells. The catch is the rows and columns will be given as letters. This is the system by which letters are mapped to integer values:

$$A = 1$$
, $B = 2$, $Z = 26$, $AA = 27$, $AB = 28$, $AD = 30$, $AAA = 703$

Input

The first line of input contains T, the number of test cases that follow. The next line contains a number M, the number of minutes it takes you to input data into a single cell, a string or integer R which gives you a clue for the number of rows, and a string or integer C which gives you a clue for the number of columns.

Output

For each test case, on a separate line, print the number of minutes it will take for you to finish your task. It is guaranteed that the number of minutes will not overflow a signed 32-bit integer.

Constraints

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1 <= T <= 100

1 <= M <= 10,000

1 <= R <= 2,000,000,000

1 <= C <= 2,000,000,000
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Example Input File

3 4 C C 5 AA AAA 3 5 AA

Example Output to Screen

36 94905 405